

Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method comprising:
clamping a flexible pellicle between a first frame member and a second frame member, wherein the first frame member and the second frame member join to form a pellicle frame; and
mounting the pellicle frame to a reticle by attaching at least one of the first frame member and the second frame member to a the reticle; and
lithographically exposing a substrate to a pattern on the reticle with the pellicle frame mounted to the reticle.
2. (Previously Presented) The method of Claim 1, wherein the flexible pellicle comprises a polymer membrane.
3. (Previously Presented) The method of Claim 2, wherein the flexible pellicle comprises amorphous cyclized perfluoropolymer.
4. (Previously Presented) The method of Claim 1, wherein the flexible pellicle comprises a polymer thermoplastic film having an optical transparency permitting at least 90% transmission at a pre-determined exposure wavelength.

5. (Previously Presented) The method of Claim 1, wherein the flexible pellicle comprises a polymer thermoplastic film having an optical durability of at least 90% transmission after a plurality of kiloJoules/cm² irradiation equivalent dose at a pre-determined exposure wavelength.

6. (Previously Presented) The method of Claim 1, wherein said clamping the flexible pellicle between the first frame member and the second frame member applies tension on an outer edge of the flexible pellicle.

7. (Previously Presented) The method of Claim 1, further comprising heating the first frame member, the second frame member, and the flexible pellicle above a glass transition temperature of the flexible pellicle.

8. (Previously Presented) The method of Claim 1, further comprising heating the first frame member, the second frame member, and the flexible pellicle up to temperature below a melting point temperature of the flexible pellicle.

9. (Previously Presented) The method of Claim 8, further comprising cooling the first frame member, the second frame member, and the flexible pellicle.

10. (Previously Presented) The method of Claim 1, further comprising selecting a first material for the first frame member and selecting a second material for the second frame member, wherein the first material has a lower coefficient of thermal expansion than the second material.

11. (Previously Presented) The method of Claim 1, further comprising attaching screws to the first frame member and the second frame member.

12. (Currently Amended) The method of Claim 1, wherein said attaching at least one of the first frame member and the second frame member to the reticle comprises:

placing a polymer layer between the ~~flexible~~ reticle and at least one of the first frame member and the second frame member, the polymer layer having a melting point between about 60 to 150 degrees Celsius; and

heating the polymer layer between about 45 to 150 degrees Celsius.

13. (Original) The method of Claim 12, wherein the polymer layer comprises a thermoplastic.

14. (Previously Presented) The method of Claim 12, further comprising applying pressure to the reticle and at least one of the first frame member and the second frame member during said heating.

15. (Previously Presented) The method of Claim 12, further comprising forming a hermetic seal between the reticle and at least one of the first frame member and the second frame member.

16. (Previously Presented) The method of Claim 12, further comprising cutting the polymer layer to match a bottom surface area of at least one of the first frame member and the second frame member.

17. (Previously Presented) The method of Claim 12, wherein said heating is local to the polymer layer bonding the at least one frame member to the reticle.

18.-32. (Canceled)

33. (Previously Presented) The method of claim 1, wherein clamping the flexible pellicle comprises friction fitting the flexible pellicle between the first frame member and the second frame member.

34. (Previously Presented) The method of claim 1, wherein attaching comprises attaching the at least one of the first frame member and the second frame member to the reticle using a low outgas polyester without an adhesive.

35. (Previously Presented) The method of claim 1, wherein clamping the flexible pellicle comprises stretching the flexible pellicle across the first frame member.

36. (Previously Presented) The method of claim 1, whereir:

the second frame member comprises a second generally rectangular member;

the first frame member comprises a first generally rectangular member that is dimensioned to fit within the second frame member; and

clamping the flexible pellicle comprises arranging the flexible pellicle across the first frame member and fitting the first frame member in the second frame member.

37. (Previously Presented) The method of claim 1, wherein clamping the flexible pellicle comprises clamping a perimeter of the flexible pellicle between the first frame member and the second frame member.

38. (Previously Presented) The method of claim 37,
wherein clamping the perimeter of the flexible pellicle
comprises clamping a rectangular perimeter of the flexible
pellicle between the first frame member and the second frame
member.